

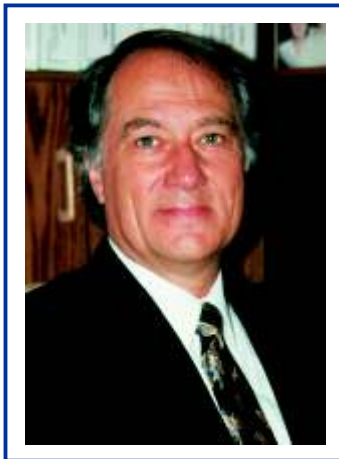
Specialist Consulting Services for Concrete Floors and Slabs-on-Grade



**Deterioration Cause Evaluation
Investigation and Testing
Construction & Protection Advice
Development of Restoration Strategies**



Specialist Consulting Services for Concrete Floors and Slabs-on-Grade



Paul Jeffs
President

As principal of PJ Materials Consultants Limited, Paul Jeffs specialises in masonry and concrete structures and provides technical advice at all stages of construction or restoration and conservation. Prior to forming the operation in 1989, he was employed for over 25 years within the construction industry around the world. For the last eighteen years of this time he was employed by a multi-national group headquartered in the United Kingdom which manufactured a vast range of materials and products for construction-related industries. In 1976 he transferred from England to the Middle East, living for three years in Bahrain and Iran. During this time he was involved in many projects throughout the Arabian Gulf, including Saudi Arabia, Kuwait, United Arab Emirates and Qatar. In 1979 he moved to Japan and established a regional base from where he became involved in projects throughout South East Asia, including the Philippines, the Republic of Korea, Hong Kong, Taiwan, Indonesia, Singapore and Malaysia. Prior to emigrating to Canada in 1982, he was also involved in construction projects in South Africa and India.

Paul currently serves on the Canadian Standards Association Technical Committee (Associate) and the High Performance Sub-Committee for New Parking Structures (CAN/CSA S-413); he served on the CSA 266 series of admixture standards, and is a past director of the Concrete Restoration Association of Ontario. He also served as a member of the Technical Advisory Committee to the Ontario Ministry of Housing for the deterioration and repair of existing parking structures, was a member of the Ontario Ministry of Transportation technical advisory committee for the development of restoration standards and is a current member of the National Research Council's Working Group on Repointing Mortars. He has provided materials related expertise as a consultant for numerous industries and has authored many technical papers.

Paul is a lecturer for the Continuing Technical Education Division of Dalhousie University and presents technical courses as part of the University of Toronto Professional Development Department's Building Science Certificate Program. He has also presented courses and programs for many organizations, such as the National Capital Commission, the Canadian Dam Association, the Department of National Defense and the Canadian Society for Civil Engineering. He provides training courses and technical seminars on such topics as Restoration, Reconstruction & Maintenance of Masonry Structures; Restoration & Conservation of Heritage Structures & Older Buildings, Modern Concrete Materials & Practices, Concrete Repair & Protection; and, Designing, Specifying & Constructing Concrete Slabs on Grade. He has been a guest lecturer at universities, he has authored and presented papers at many conferences and is a regular presenter of technical training courses in the Middle East.

SPECIALIST CONSULTING SERVICES

Concrete Floors and Slabs-on-Grade

PJ Materials Consultants Limited provide consulting services for the special problems associated with the design, construction, restoration and protection of concrete floors and slabs-on-grade. Techniques, materials and practices vary widely and the key factors that produce satisfactory performance are not always well understood within the industry.

The quality of the concrete, the construction of the subgrade and the use of vapour retarders can all have major impacts on the development of such deficiencies as cracking and crazing, curling and warping, poor wear and abrasion resistance, as well as failures of coatings and toppings.

The performance of shake-on-hardener treatments can depend on such factors as the size of the workforce, the ambient conditions during the application, the timing of the operations, as well as other considerations such as the consistency of the fresh concrete.



The preparation of the concrete substrate, ambient conditions, application techniques and service exposure conditions all have an effect on the performance of coatings, toppings and other surface treatments.

The achievement of adequate flatness and levelness will largely depend on the effectiveness of the construction practices techniques, although other factors can cause problems.

The selection of finishing techniques and surface treatments, as well as service environment and maintenance practices, all have an impact on how slippery a concrete floor slab will be in service.



PJ Materials Consultants Limited have considerable experience in investigating these and other problems associated with concrete floors and slabs-on-grade. When problems arise, the identification of potential cause by on-site investigation and the use of reliable testing techniques are typically key factors that can often resolve dispute between opposing parties.

PJ Materials Consultants Limited is a totally independent consulting organization and is not affiliated with any manufacturer, supplier or contractor.

Consulting Services

- **Investigation & Analysis**

- Troubleshooting
- Cause Investigation
- On-site Testing
- Laboratory Analysis



- **Recommendations**

- Materials
- Methods
- Applications



- **Project Management**

- Budget Review
- Specifications & Bid Documents
- Contract Documents
- Inspection & Testing

- **Specialist Services**

- Expert Testimony
- Dispute Resolution
- Insurance Investigation

- **Also Specializing in:-**

- Construction Materials Technology
- Concrete Repair & Protection
- Durable Concrete Mix Design
- Restoration of Masonry Structures
- Restoration of Heritage Structures
- Special Materials Technology
- Specialist Grouting Applications



Structural Review, Analysis & Engineering and Specialist Computer-aided Testing and Monitoring Services can be supplied through associated companies

Technical Training

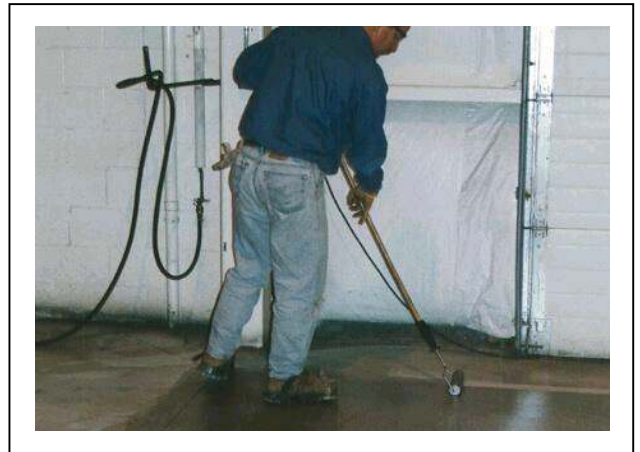


Special seminars and training courses, which feature the design, specification, construction, protection and restoration of concrete and masonry structures, are provided across Canada in association with the Continuing Education Division of Dalhousie University and throughout the Middle East with Promis Project Management Engineering Systems, Dubai, United Arab Emirates. Courses in other countries are available by arrangement.

For information regarding the latest courses please visit our web site at www.pjmc.net and click on "What's New".



- **Technical Training Courses**
- **Technical Workshops and Seminars**
- **In-House Presentations**
- **On-Site Training**



- **Customized Courses**
- **Conference Presentations**
- **Corporate Seminars**

All topics are presented using digital projection and customized manuals are provided to all attendees.

TECHNICAL TRAINING COURSES

The courses detailed below are offered as public courses - or they can be provided as customized in-house courses

(Please check out our web site for future course topics, dates and locations)

Concrete Practice & Technology

Provided as one-day separate modules up to five-days total



Designing, Specifying and Constructing Concrete Slabs on Grade

A one or two-day course



Investigating & Monitoring Concrete Problems

A one or two-day course



Designing & Implementing Effective Strategies for Concrete Repair & Protection (Getting it Right the Second Time!)

A two-day course



Modern Concrete Materials & Practices

(Part One)
Mistakes, Mis-Uses & Misconceptions
The first two course in a series



Modern Concrete Materials & Practices (Part Two) Confusion, Conflict & Controversy The second two course in a series



Restoration, Reconstruction & Maintenance of Masonry Structures

A two-day course



The Latest Materials, Techniques & Practices for the Restoration & Conservation of Heritage Structures

A two-day course



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Partial List of Clients

PJ Materials Consultants are proud to have provided consulting services to the following companies and organizations

CN Rail, Toronto	Windsor Mold Company, Ontario
City of Toronto,	Collins & Aikman, Ingersoll, Ont
Region of Peel, Brampton, Ontario	Carlton Group, Sarnia, Ont
Royal Bank, Montreal	Place Des Jardins, Montreal
Public Works Canada, Hull, Quebec	Marathon Realty, Toronto
Toronto Real Estate Board, Don Mills	Westcoast Energy, Fort St John, B.C.
Toronto District Heating Corporation	E.S. Fox Ltd., Niagara, Ont
Consultants BPR, Quebec	Dubrick Property, Kitchener, Ont
M.S. Yolles & Partners, Toronto	Graham Construction, Saskatoon
Inzola Const'n (1976) Ltd., Brampton	Laskey Properties, London, Ont
County of Lambton, Ontario	N.B. Dept of Transportation, NB
Atlas Specialty Steel, Welland, Ontario	Mount Allison University, NB
Strait Crossing Inc., P.E.I.	Autoport Ltd., Halifax
Kimberley-Clark, Terrace Bay	Canadian Coast Guard, NF
National Capital Commission, Ottawa, Ont	Harbour Station, Saint John, NB
Ellis-Don Construction, London, Ont	Sze Straka, Waterloo, Ont
Unit Part Company, Oklahoma City	Design Alaska, Fairbanks, Alaska
Beaverbrook Art Gallery, Fredericton, NB	Saint Louis Church, Waterloo, Ont
Duschenes & Fish Architects, Montreal	Arthur Arseneau Architect, Sackville, NB
Omers Realty Management Corporation	Architecture 2000, Moncton, NB
Avenor Inc., Gatineau, Quebec	Stackpole Limited, Stratford, Ont
Regional Municipality of Ottawa-Carleton, Ont	Professional Arts Building, Moncton, NB
Grand River Conservation Authority, Ontario	SaskWater, Saskatchewan
Beaverbrook Art Gallery, New Brunswick	McCormick Rankin, Kingston, Ontario
Kuwait Petroleum Company, Kuwait	Qatar Liquefied Gas Company

For examples of past projects, please
visit our web site on www.pjmc.net
and click on "Case Studies"

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